EXHIBIT “4”

AMERICAN SOCIETY OF EXERCISE PHYSIOLOGISTS

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Standards of Practice

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Introduction

All professions are guided by a set of inter-related concepts, definitions, and propositions on which their knowledge base is built. This knowledge provides the Exercise Physiologist the authority to make professional judgments consistent with the ethical obligations of the profession and expected behaviors with clients, colleagues, and others. Society grants the professional Exercise Physiologist the powers and obligations to practice exercise physiology. Members of the profession are responsible for ensuring safe and effective practice. The exercise physiology standards address the practice and use of "exercise medicine" in healthcare.

The following standards have been approved by the ASEP Board of Directors to protect the public health, safety, and welfare, and to provide ongoing competency of Exercise Physiologists. The **Standards of Practice** are essential for continued improvement of the practice of exercise physiology. They are intended to define professional competencies required for accepted and safe exercise physiology practice in the United States. The Standards have been written to assist individuals in the general public, healthcare community, fitness, and athletic industry by providing the information regarding the practice of exercise physiology.

Standards of Practice

Standard 1: Declarations and Definitions The ASEP Board of Certification declares that the professional Exercise Physiologist requires certification according to the ASEP certification procedures, and that the health and welfare of the public is protected by Exercise Physiologists who are academically qualified and certified as EPCs to practice exercise physiology.

Board means the ASEP professional organization Board of Certification established pursuant to directives from the ASEP Board of Directors.

Exercise Physiologist means a person who has an academic degree in exercise physiology, who is certified by ASEP to practice exercise physiology (as an EPC, i.e., Board Certified Exercise Physiologist), or who has a doctorate degree with an academic degree or emphasis in exercise physiology from an accredited college or university.

Exercise physiology means the identification of physiological mechanisms underlying physical activity, the comprehensive delivery of treatment services concerned with the analysis, improvement, and maintenance of health and fitness, rehabilitation of heart disease and other chronic diseases and/or disabilities, and the professional guidance and counsel of athletes and others interested in athletics, sports training, and human adaptability to acute and chronic exercise.

To be eligible to sit for the ASEP **Exercise Physiologist Certified**; (EPC) examination, the candidate must have:

An academic degree with a major in exercise physiology is the preferred degree, but related degree programs such as exercise science, kinesiology, sport science, human performance, or a related degree will still allow a person to sit for the exam if he or she has completed with a grade of "C" or better "7" of the following "9" academic courses (listed on an official transcript):

- Exercise physiology (including but not limited to titles: physiology of exercise and sport; advanced exercise physiology; cardiovascular physiology; and physiology of exercise)
- Fitness assessment and prescription (including but not limited to titles: health and fitness testing; cardiopulmonary rehabilitation; exercise prescription; graded exercise testing; and exercise electrocardiography)
- Exercise metabolism (including but not limited to titles: exercise biochemistry; exercise regulation; and metabolism)
- Kinesiology (including but not limited to titles: anatomical kinesiology; applied anatomy; neuromuscular kinesiology; and advanced kinesiology)
- Research design (including but not limited to titles: research; research design; test and measurements; and statistics)
- Biomechanics (including but not limited to titles: sports biomechanics; and mechanical kinesiology);
- Environmental physiology (including but not limited to titles: environmental exercise physiology; applied exercise physiology; and altitude training);
- Nutrition (including but not limited to titles: sports nutrition and ergogenic aids; and exercise nutrition)
- Exercise and special populations (including but not limited to titles: aging and exercise; pediatric exercise; and disabled and exercise).
- Documentation of hands-on laboratory experiences in exercise physiology (or related) laboratories (e.g., gross anatomy, kinesiology, biomechanics, muscle testing, psychophysiology, clinical and/or adult fitness laboratories and fitness and/or rehabilitation programs).
- Current ASEP membership.

Standard 2: Code of Ethics Individual ASEP members who engage in the practice of exercise physiology shall adhere to the ASEP Code of Ethics. The Code provides guidance for decision-making concerning ethical matters, and serves as a means for self-evaluation and reflection regarding the ethical practice of exercise physiology. Adherence to the Code is expected, and is based on the belief that Exercise Physiologists are self-regulated, critical thinkers who are accountable and responsible for their high quality competence in the practice and delivery of exercise physiology concepts, ideas, and services. The Code is organized around 10 primary values that are central to ethical practice of exercise physiology.

The Exercise Physiologist shall:

1. Accurately communicate and provide health and fitness, educational, preventive, rehabilitative, and/or research services equitably to all individuals regardless of social or economic status, age, gender, race, ethnicity, national origin, religion, disability, diverse values, attitudes or opinions.
2. Be accountable for individual non-medical judgments and decisions about health and fitness, preventive, rehabilitative, educational, and/or research services.

3. Maintain high quality professional competence through continued study of the latest laboratory techniques and research in preventive and rehabilitative services.
4. Be expected to conduct health and fitness, preventive, rehabilitative, educational, research, and other scholarly activities in accordance with recognized legal, scientific, ethical, and professional standards.
5. Respect and protect the privacy, rights, and dignity of all individuals by not disclosing health and fitness, rehabilitative, and/or research information unless required by law or when confidentiality jeopardizes the health and safety of others.
6. Call attention to unprofessional health and fitness, preventive, rehabilitative, educational, and/or research services that result from incompetent, unethical, or illegal professional behavior.
7. Contribute to the ongoing development and integrity of the profession by being responsive to, mutually supportive of, and accurately communicating academic and other qualifications to colleagues and associates in the health and fitness, preventive, rehabilitative, educational and/or research services and programs.
8. Participate in the profession's efforts to establish high quality services by avoiding conflicts of interest and endorsement of products and supplements in the health and fitness, preventive, and/or rehabilitative service and programs.
9. Participate in and encourage critical discourse to reflect the collective knowledge and practice within the exercise physiology profession to protect the public from misinformation, incompetence, and unethical acts.
10. Provide health and fitness, preventive, rehabilitative, and/or educational interventions grounded in a theoretical framework supported by research that enables a healthy lifestyle through choice.

Standard 3: Practice of Exercise Physiology The practice of Exercise Physiology shall include the use of a variety of equipment that enables the Exercise Physiologist to **measure**, **examine**, **analyze**, and **provide instruction** to evaluate the components of physical fitness. Such practice is applied to apparently healthy individuals, as well as to individuals with known disease or ill-health. The goals for such practice is to: (a) promote health and wellness; (b) improve the components of physical fitness; (c) prevent disease and disability (via the identification of risk factors and behaviors that may impede mind-body functioning); (d) assist in restoring health to clients with disease and/or disability; and (e) rehabilitate clients to their optimal functional level following physical or mental illness.

Exercise medicine is the comprehensive delivery of treatment services concerned with the analysis, improvement, and maintenance of the physiological mechanisms underlying physical and mental health, fitness, and well-being through the scientific prescription of regular exercise, the rehabilitation of heart disease, and other chronic diseases and/or disabilities that is planned, structured, and repetitive with the primary healthcare purpose of enhancing the client or patient's functional integrity of the cardiorespiratory, musculoskeletal, sensory motor, and cognitive systems.

The equipment used in the **practice of exercise physiology** may include the use of submaximal and maximal testing using treadmills and various ergometers to make evaluations and recommendations regarding, but not limited to, metabolic processes, the cardiorespiratory system (VO2 max tests), the musculoskeletal system (strength and power tests), and body composition (percent body fat tests).

The **measurement**, **examination**, **analysis**, and **instruction** will be done for the purpose of research, counsel, and enhancing athletic performance and improving physical and/or emotional well-being. Nothing in the above description authorizes the exercise physiologist to diagnose disease either by using the electrocardiogram or by any means resulting from other exercise physiology laboratory procedures. However, due to the use of exercise as a diagnostic tool in many medical fields, exercise physiologists may be used by medical personnel to conduct tests that assist in the medical diagnosis of disease.

Having concluded that the exercise physiologist does not diagnose disease or perform clinical services that infringe on the practice of others (particularly the medical community) does not mean that the exercise physiologist does not have the right to identify and discuss signs and symptoms that otherwise correlate with diseases and/or clinical dysfunctions. Also, exercise testing of clients with known risk factors for coronary artery disease should be perform with the supervision of a physician who is responsible for ensuring that the

exercise laboratory is properly equipped to handle emergencies. The physician is ultimately responsible for interpreting the ECG data from testing, and any timely administration of drugs, defibrillation (if required), and any other appropriate medication.

The **Board Certified Exercise Physiologist** (EPC) is responsible for: (a) assisting in the supervision of the exercise laboratory and personnel; (b) preparing the client/subject for placement of the electrodes; (c) taking a resting blood pressure and 12-lead ECG strips; (d) determining the exercise ECG response to the exercise protocol; and (e) ruling out any contraindications to continuing the test.

The **EPC** is also responsible for acknowledging the scientific and medical findings that associate with specific diseases and/or dysfunctions along with the appropriate language for sharing the same (i.e., primary and secondary risk factors) with the client/subject, monitoring the subject's cardiovascular status (using metabolic equipment to determine oxygen consumption and related cardiovascular responses) throughout exercise and recovery periods, and instructing the client/subject how to prepare for the test.

Testing for symptom-limited maximum oxygen consumption (primarily in post-myocardial infarction patients) or maximum oxygen consumption, VO2 max, (i.e., the greatest amount of oxygen a person can use performing dynamic exercise involving a large muscle mass) is one such test to identify and discuss signs and symptoms that might associate with disease and/or dysfunction. VO2 max represents the amount of oxygen transported and used in cellular metabolism. Maximum oxygen consumption is equal to maximum cardiac output (Q) times maximum arteriovenous oxygen difference (i.e., tissue extraction of O2). Since Q is equal to the product of heart rate(HR) and stroke volume (SV), the test helps to evaluate the role of both in the transport of blood to the tissues. Myocardial oxygen uptake is determined by the Board Certified Exercise Physiologist through the use of a regression formula, such as [MVO2 = .14 (HR x SBP x .01) - 6.3]. The product of HR and systolic blood pressure (SBP) is called double product (DP). It is a linear relation between MVO2 and coronary blood flow. During exercise, HR increases linearly with workload and VO2. Systolic blood pressure rises with increased work as a result of the increase in cardiac output while diastolic pressure usually remains the same. Failure of SBP to rise with exercise can be the result of aortic outflow obstruction, left ventricular dysfunction, or myocardial ischemia. Changes in blood pressure may also reflect peripheral resistance, given that systemic vascular resistance (SVR) equals mean arterial pressure (MAP) divided by cardiac output (Q). Since cardiac output is expected to increase with progressive increments in exercise work and MAP usually changes very little, then, SVR is expected to decrease with exercise.

Standard 4: Definitions of Practice Exercise physiology **measurement** and **examination**" includes administering a health history questionnaire, practical laboratory evaluation, and assessment of the musculoskeletal system and/or cardiorespiratory system using standard laboratory equipment, exercise tests protocols, exercise programs, and risk factor modification and/or measurements to assist in evaluating the client's overt and/or objective responses, signs, and/or symptoms for cardiorespiratory fitness of individuals who are apparently healthy, or who have disease including, but are not limited to, tests that measure body composition, range of motion (flexibility), muscle strength, endurance, work, and power; tests that assist in the overall analysis of the central and/or peripheral components of oxygen consumption and energy expenditure; tests of pulmonary function, and exercise prescription for cardiorespiratory fitness of individuals with metabolic disorders including, but not limited to, deficiencies of the cardiovascular system, diabetes, lipid disorders, hypertension, cancer, cystic fibrosis, chronic obstructive and restrictive pulmonary diseases, arthritis, organ transplant, peripheral vascular disease, and obesity; and treadmill or other ergometer test protocols in conjunction with exercise electrocardiography (ECG) to identify the heart rate and ECG responses at rest and during submaximal and maximal (graded) exercise programs in addition to specific contraindications for continuing exercise.

Exercise physiology **examination** of clients does not include examining any person for the purpose of "diagnosing" any disease or organic condition, as though the board certified exercise physiologist has licensure. Nothing herein, however is intended to preclude the board certified exercise physiologists from stress testing and/or using a variety of different ergometers in assessing, determining and/or finding the root cause of a problem, particularly when it comes to educating and consulting with subjects.

Exercise physiology **instruction** includes providing educational, consultative, or other advisory services for the purpose of helping the public with issues and concerns regarding fundamental and scientific information about mind-body health and fitness. **Instruction** pertains to matters that are believed to develop and/or maintain health, fitness, rehabilitation, and/or athletics is also included.

Instruction includes, but is not limited to, the acute physiological responses to exercise; chronic physiological adaptations to training; designing resistance training programs; measuring energy expenditure at rest and during exercise; hormonal regulation and/or metabolic adaptations to training; cardiorespiratory regulation and adaptation during exercise; thermal regulation during exercise; exercising at altitude, underwater, and in space; optimizing sports training through the use of ergogenic aids and better nutrition; appropriate body composition and optimal body weight and the role of each in diabetes and physical activity; growth and development of young athletes; aging and gender issues; preventing cardiovascular disease through exercise; prescription of exercise for health and performance; biomechanical aspects of posture and sports; physiological assessment of human movement; stress testing protocols for athletics and special populations; resting and exercise electrocardiography; biobehavioral techniques for reducing stress and/or increasing running economy; and biochemistry of nutrition and exercise.

Exercise physiology **analysis** and **treatment** includes hands-on contact to perform specific laboratory tests, with specific expectations for 'treatment' measures and activities. This may include, but not limited to, range of motion exercises, muscle strength and muscle endurance exercises, lean muscle tissue-fat analysis, musculoskeletal and/or postural exercises, sports nutrition programs, sports biomechanics instructions for the enhancement of sports or occupational related skills, stress management exercises, sports training and the development programs, cardiac and pulmonary rehabilitation (including, but not limited to, development of such programs, supervising testing, development of exercise prescription, and other functions such as the education and counseling of patients), and exercise physiology instruction that pertains to all forms of sports training and athletics.

Standard 5: Exercise Physiologist Certified (EPC) According to the ASEP Board of Directors, and the ASEP Board of Certification, no person shall use the title **Exercise Physiologist Certified** (also referred to as **Board Certified Exercise Physiologist**) or practice exercise physiology, whether or not compensation is received or expected, unless he/she holds a valid ASEP national certification (defined as the EPC certification) or has a doctorate degree with an emphasis in exercise physiology from a regionally accredited college or university.

Standard 6: The EPC Purpose and Scope of Practice The EPC professional acknowledgment and registration with ASEP grants the individual with appropriate credentials, including ASEP designated academic course work, internship hours, hands-on experiences, successful completion of the EPC examination, and appropriate professional conduct, the ASEP authorization of the title **Exercise Physiologist**.

Certified Exercise Physiologists are committed to health and fitness promotion programs, private homes and community agencies, community integration with corporate wellness and training centers, cardiac and pulmonary rehabilitation, universities, industrial settings, retail businesses, professional lifestyle managers, and research activities. Exercise Physiologists work with subjects, patients, and clients in various roles including, but not limited to, education, consultation, research, administration, and manager in the following:

- **Sports Programs:** Sports director, Strength and conditioning coach, Director of state and national teams
- **College and University Programs:** Professor Researcher Administrator Wellness Coordinator
- **Community Practice:** Manage health and wellness programs Manage fitness and athletic programs Direct corporate fitness/wellness programs Health and fitness club instructor Health/fitness director in correctional services
- **Clinical Practice:** Test and supervise cardiopulmonary patients; Evaluate and supervise special populations: Diabetics, Obesity, Rheumatoid arthritis, Dyslipoproteinemia, Cystic fibrosis,

Hypertension, Children with heart disease, Low functional capacity, Pregnancy, Exercise technologies in cardiology suites, Work hardening, Occupation rehabilitation

- **Government and Military Services:** Fitness director/manager in military, including Air Force Army Careers in military services
- **Business with the Public Sector:** Sports management, Consultant, Functional biomechanist/ergonomics, Sport psychologist
- **Private Practice:** Personal health/fitness consultant, Sport psychology, Sport biomechanics, Health risk manager
- **Sports Nutrition Programs:** Exercise nutritionist, Exercise nutrition counselor
- **International Programs and Practice:** Health/fitness promotion, Sports consultant, Affiliation with international organizations

Standard 7: Professional Responsibility and Competence Certified Exercise Physiologists and Exercise Physiologists with the doctorate degree have a responsibility to read the literature, think clearly, and follow the ASEP Code of Ethics and the Standards of Practice. Exercise Physiologists practice only within the boundaries of their competence, as defined by their academic training, hands-on experiences, and/or the ASEP national professional certification. When indicated, exercise physiologists monitor their effectiveness as professionals and take steps including, but not limited to, continuing education to maintain a reasonable level of awareness of current scientific and professional information.

Exercise Physiologists have a responsibility to clients (i.e., a person who engages the advice or services of the EPC) and/or patients (a person who receives healthcare because of illness or for surgery) and/or to the agency or institution within which services are performed to maintain high standards of professional conduct. The professional responsibility is to respect the dignity, and mental, physical, and emotional welfare of subjects used in research and/or similar investigative activities, individuals (such as, but not limited to, persons interested in health and fitness promotion, improvement in athletics and sports training programs, and requested laboratory tests to evaluate and develop a lifestyle risk factor plan clients and/or patients interested in decreasing risk factors that associate with heart disease, obesity, stress, and the management of specific metabolic and/or musculoskeletal dysfunctions), and patients in cardiopulmonary rehabilitation programs, exercise prescriptions, and/or diabetic or hypertension centers.

Disclosure of test results to the clients and/or patients is initiated and performed by Exercise Physiologists for the purposes of describing, interpreting, comparing, and developing a plan of action consistent with the research-based benefits of service. Exercise Physiologists recognize that the records and other pertinent information are confidential, and that the client and/or patient has the right to full access of all test results, records, and copies of records. Use of data derived from laboratory tests for purposes of developing a training program, research, or publication is confined to content that is disguised to ensure the anonymity of the subjects, individuals, or clients.

Other than the implied statements of professional conduct outlined in the Code of Ethics, the ASEP Board of Certification is not responsible for the practice of exercise physiology by doctorate prepared Exercise Physiologists who are not certified by ASEP.

Standard 8: Revocation of Certification The ASEP Board of Certification may revoke or otherwise take action with regard to the application or certification of an individual in the case of ineligibility for certification; irregularity in connection with any certification application or examination; unauthorized possession, use, access, or distribution of certification examinations, answer sheets, certificates, certificant or applicant files, documents, or other materials; material misrepresentation or fraud in any statement to the ASEP Board of Certification or to the public, including, but not limited to, statements made to assist the applicant, certificant, or another apply for, obtain, or retain certification; gross or repeated negligence in professional work, which includes releasing confidential tests information of subjects, individuals, and/or clients with whom the certificant

or applicant has a professional relationship; conviction of, plea of guilty, or plea of no contest to a felony which is directly related to public health, exercise physiology care, or education; and not adhering to the eligibility requirements for certification candidacy or recertification requirements and Standards of Professional Practice of the Profession.

Standard 9: Disciplinary Committee and Review Process The ASEP Board of Certification, by a majority vote, shall appoint five persons who are Certified Exercise Physiologists to the **Professional Practice and Discipline Committee**. When the Board of Directors receives allegations that raise the issue of **Revocation of Certification**, the Board of Directors shall transmit such allegations to the Chair of the Professional Practice and Discipline Committee. If the Committee determines that no good cause exists to question eligibility or compliance with the Standards of Professional Practice, no further action shall be taken. If the Committee determines, by majority vote, that good cause does exist, it shall direct the transmittal to the applicant or certificant by certified mail or tracked courier, return receipt requested, of a letter containing a statement of the factual allegations constituting the alleged violation and the disciplinary standard allegedly violated. The letter shall also include the following recitation of rights and procedures:

1. The applicant or certificant shall have 30 days in which to respond to the allegations, provide comments regarding appropriate sanctions, and request an oral hearing if he or she disputes the allegations.
2. Sanctions may be imposed if the allegations are determined to be true by the Committee, or if the applicant or certificant fails to submit a timely response.
3. The applicant or certificant will be deemed to consent to the imposition of sanctions by the Committee if he or she does not dispute the truthfulness of the allegations.
4. The applicant or certificant must appear in person if he or she requests a hearing.
5. The applicant or certificant may be represented by counsel at the hearing, may present evidence on his or her behalf, and may examine or cross-examine any witness under oath.

Standard 10: Disciplinary Hearing, Appeal, and Sanctions If an applicant or certificant disputes the allegations and requests a hearing, the Chair of the Professional Practice and Discipline Committee shall schedule a hearing before the Committee. The opening statements by the applicant or certificant, any testimony, and closing remarks shall be taped. The hearing and related matters shall be determined by majority vote.& The applicant or certificant may appeal the decision by the Committee regarding the imposition of sanctions. An appeal must be filed within 30 days of the applicants or certificant's receipt of the decision through the submission of a written appeals statement to the Committee.

An Appeals Committee of three Certified Exercise Physiologists from the Board of Certification should be formed by the Committee to render a decision, using majority vote, on the record without oral hearing, although written briefing may be submitted. The decisions of the Professional Practice and Discipline Committee and the Appeals Committee shall be rendered in writing to the Chair of the Board of Certification. A decision either by the Committee or the Appeals Committee shall contain factual findings, conclusions of law, and any sanctions applied. It shall be transmitted to the applicant or certificant by certified mail or tracked courier, return receipt requested. Sanctions for violations of any ASEP Standard may include one or more of the following: denial or suspension of eligibility; revocation; non-renewal; censure; reprimand; suspension; special training; or other corrective actions.

If the Committee believes that there is an immediate and irreparable injury to the health of the public, the Committee can, under the **"Emergency Procedure,"** suspend certification for up to 60 days pending full hearing. The individual applicant or certificant authorizes the ASEP Board of Certification and its agents to communicate any information relating to the certification to employers, other applicants and certificants, educational programs, and others by means of newsletter or otherwise. The individual releases, discharges, and exonerates the members of the ASEP Board of Certification and the members of the ASEP Board of Directors, agents, and any person furnishing documents, records, and other information relating to the individual's eligibility, certification, or recertification from any and all liability of any nature and kind, arising out of the furnishing or inspection of such documents, records, or other information, and any investigation, evaluation, and communication regarding the individual's eligibility, certification, or recertification, made by the ASEP Board of Certification.

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